

Applicant: James A. Proctor, Jr.
Application No.: 09/772,176

REMARKS/ARGUMENTS

Claims 1, 2, 5-14, 16, 17, 19, 21, 22, 25-36, 39, and 42 are currently pending in this application. Claims 1, 2, 5-14, 16, 17, 19, 21, 22, 25-36, 39 and 42 are amended.

Claim Rejections - 35 USC §103

Claims 1, 2, 11-14, 16, 17, 19, 21, 22, 31-36, 39 and 42 are rejected under 35 USC §103(a) as being unpatentable over U.S. Patent US 6,700,881 to Kong et al. (hereinafter Kong) in view of U.S. Patent US 5,621,737 to Bucher (hereinafter Bucher). Claims 5-7 and 25-27 are rejected under 35 USC §103(a) as being unpatentable over Kong in view of Bucher and further in view of U.S. Patent Publication 2001/0041584 to Watanabe (hereinafter Watanabe). Claims 8-10 and 28-30 are rejected under 35 USC §103(a) as being unpatentable over Kong in view of Bucher and further in view of U.S. Patent No. 6,430,244 to Ryu (hereinafter Ryu). The Applicants respectfully disagree.

The Applicants respectfully submit that all of the claims are, in fact, patentable over the cited references for the following reasons. Claim 1 recites at least one element which is not taught or suggested in the cited references, namely:

detecting a movement of a communication device communicating the wireless signal or a movement of an external object in a signal path based on a measurement of a metric of a

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modulated signal attribute comprised of at least one of amplitude of the wireless signal as a whole, frequency of the wireless signal, or phase of the wireless signal as a whole, the phase being determined relative to a reference signal separate from the wireless signal

(emphasis added). The cited references are silent concerning movement of an external object in the signal path. Furthermore, Kong is silent concerning movement of a communication device. Specifically, the Examiner cites column 2, lines 9-13 and 3-25 as teaching an “amount of motion of the communication device.” However, Kong does not teach anything that could be construed as “motion”.

The Applicants respectfully submit that when read as a whole, taking into account the entire context, Kong is directed only to the effects of distance between a transmitter and a receiver and the resulting weak signal, and not to changes of distance, which is movement, as recited in claim 1. To cite one specific example, on page 2 of the Action the Examiner construes the words “when the distance between the base station and the mobile station increases ...” (col. 2, lines 14-15) as implying that the distance is increasing over time. The previous paragraph, however, beginning at col. 2, line 3, states “It is well-known that CDMA communication systems cannot provide reliable communication service when a mobile station is located at an outer service area of the base station or is in a bad channel environment”. (Emphasis added.) Such words as “located” and “is in a bad channel environment” imply that the mobile station is already at a specific location, and is

not moving toward or away from a specific location. In context, then, the phrase “when the distance between the base station and the mobile station increases ...” simply means this: the larger the fixed distance between the base station and the mobile station, the lower the SNR. The Applicants respectfully submit, therefore, that the Examiner is “reading” motion of the mobile station into Kong when, in fact, Kong is silent throughout with respect to such motion.

The Examiner admits that Kong does not disclose a measurement of a metric of the modulation signal attribute comprising at least one of amplitude, phase and frequency (Page 4). The Applicants agree. The Examiner relies on Bucher for this teaching. Bucher, however, does not teach or suggest the above quoted element of claim 1. First, Bucher is silent concerning frequency. Second, Bucher is silent as to an amplitude of a signal as a whole. On the contrary, Bucher teaches only a comparison of an amplitude of an I component of a signal with an amplitude of a Q component of the same signal; (see, at least, Bucher’s Figure 4 and col. 4, line 42 – col. 5, line 4). Third, Bucher does not teach or suggest the use of a phase determined relative to a reference signal separate from the wireless signal. Referring at least to Bucher’s Figures 4 and 5 and descriptions thereof throughout Bucher’s specification, Bucher is using the word “phase” to refer to points in a constellation diagram such as Figure 4. In this context, as is known to a person of ordinary skill in the art, the word “phase” refers to a relationship between I and Q components of

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a signal as represented in a constellation diagram such as Figure 4, and does not refer to the "signal as a whole".

Bucher's definition of phase thus depends on a comparison of components within the signal and does not depend on a determination "relative to a reference signal separate from the wireless signal". The definition of phase used by Bucher is further clarified in the paragraph of col. 4, lines 22-37, where he states, for example, that a phase error may be detected as a magnitude error and vice-versa, and "As used herein, errors are referred to as magnitude errors with the understanding that the term 'magnitude error' may also include or be phase errors." This definition of the word "phase" is entirely distinct from the definition of that word contained in the above quoted element of claim 1 and defined throughout the Applicants' specification.

For all of the reasons presented above, claim 1 is patentable over the combination of Kong and Bucher. Independent claims 21 and 42 recite elements corresponding to those of claim 1 and are therefore also patentable over Kong and Bucher for corresponding reasons. All other pending claims are each dependent on one of claims 1, 21, or 42, and are therefore also patentable over Kong and Bucher.

Regarding claims 5-7 and 25-27, Watanabe does not remedy the deficiencies of Kong and Bucher. Watanabe discloses a radio receiver and a method of

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amplifying various types of signals in the receiver to reduce power consumption. Watanabe is silent concerning the above discussed elements of claims 1, 21 and 42.

Regarding claims 8-10 and 28-30, Ryu does not remedy the deficiencies of Kong and Bucher. Ryu discloses a phase-locked loop circuit and is silent concerning the above discussed elements of claims 1, 21 and 42.

Based on the arguments presented above, withdrawal of the rejection of all pending claims under 35 USC §103(a) over the cited references is respectfully requested.

Conclusion

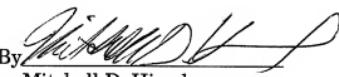
If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephonic interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

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In view of the foregoing amendment and remarks, Applicants respectfully submit that the present application is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

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Enclosure